HEALTH

EDITED BY

DR. ANDREW WILSON, F.R.S.E., &c.

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Notes by the Way

"Health is the foundation of all our physical happiness."—*Herder.*

An instructive series of cases, showing very clearly the material nature of disease-germs, and teaching us how disease is conveyed from sick to healthy persons, has just been published in a medical contemporary. The cases related were those of diphtheria. The medical man was called on Oct. 24 to see a boy aged eleven years, who had been ailing for two days or so, and found well-marked symptoms of diphtheria. A second boy was seized on the following day (Thursday). On Friday the housemaid was attacked; the cook was affected on the Saturday; and on the succeeding Tuesday another housemaid fell ill. The disease, which thus ran through a household, occurred in a farm-house, separated from all other buildings, and free from all sickness prior to the diphtheria-attack. The nearest house was several hundred yards distant, and a village was situated about a mile away.

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The abrupt outbreak of the disease made it apparent that some very direct mode of infection had been at work in inducing the malady. Hence the medical attendant made it his business to discover the source of the mischief. His labours in this direction were soon rewarded by success. On the Friday preceding the first appearance of the diphtheria (or barely three days before the first boy began to complain of illness), "a woman from a neighbouring village had brought back some needlework from her cottage, which contained at the time two sick children." One of these children died from reputed bronchitis; but as the doctor himself attended the survivor and discovered diphtheria, there seems little reason to doubt that the first child died of this latter disease. The child who died, moreover, had come from a town where diphtheria was raging. Here, therefore, the infection was carried to the farm-house either by the woman from the cottage, or by the needlework which had been executed in the sick-room. The poisonous material had thus been conveyed safely and effectually for at least two miles, and as a result five or six persons were laid down with the dread disease. This case is one which should teach us the ever-present necessity for carefully guarding against the importation of articles from, and against communication with, homes in which infectious disease exists. It teaches also, and still more powerfully, the all-important lesson, that education in health-science is a thing demanded by rich and poor alike. Had the seamstress in the above case possessed the slightest knowledge of health-laws, she would have exercised care lest the disease in her own home should spread to the homes of others.

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The danger of circulating libraries acting as sources of infection has been pointed out over and over again, but it seems needful, in view of recent communications we have received, to call attention once more to the plain duty of all who have charge of cases of infectious disease in the prevention of the spread of such ailments by careful attention to the books with which their patients are supplied. A medical man writes us that recently he saw a scarlet fever patient—whose hands were in the stage at which the skin "peels"—reading a novel bearing the label of a circulating library. He pointed out the danger of such a practice, and adds that he thought his duty would be best discharged, under all the circumstances, by burning the volume—a procedure he carried out. Convalescent patients in such cases should be supplied with literature which, after use, can be destroyed. Disinfecting a book is a tedious process, and one which is much more difficult of execution than most people would imagine. Our duty to our neighbours clearly demands the destruction of the literature, which, handled by fever patients, is singularly liable to disseminate disease broadcast.

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A German scientist has recently been experimenting on the constituents of tobacco-smoke. The smoker will learn with some satisfaction that, judging from Dr. Kissling's researches, the chances of his being injured by the nicotine of his cigar are exceedingly small. The quantity of this substance destroyed in the combustion of a cigar is very small, and, inferentially, we are led to believe that only a trifling amount of nicotine can be inhaled by the smoker. An addendum to this opinion appears to be of somewhat extraordinary nature. Nicotine is soluble in alcohol; and hence it is argued that the use of alcoholic beverages by smokers has a kind of chemical justification in preventing the accumulation of nicotine in the body. Most readers will be tempted to inquire, however, whether, after the alcohol with its contained nicotine is swallowed, the two may not together be absorbed from the stomach into the blood? Even if this latter result be attained, it is well to bear in mind that science has still a grain or two of comfort left for the smoker. Tobacco does not seem to "accumulate" in the system—at least there is no evidence at present forthcoming that the effects of smoking grow and increase in action within the body. It is probable that both by lungs, skin, and kidneys, the tobacco-principles are filtered out of the frame, and injurious effects thus avoided.

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The preliminary details of the International Health Exhibition of London, which is to replace the Fisheries Exhibition at South Kensington, have just been published. The aims of the Exhibition have been thus lucidly set forth in the prospectus:—"The object of the Exhibition will be to illustrate, as vividly, and in as practical a manner as possible, Food, Dress, the Dwelling, the School, and the Workshop, as affecting the conditions of healthful life, and also to bring into public notice the most recent Appliances for Elementary School Teaching and

Instruction in Applied Science, Arts, and Handicrafts. The influence of Modern Sanitary Knowledge and Intellectual Progress upon the welfare of the people of all classes and all nations will thus be practically demonstrated, and an attempt will be made to display the most valuable and recent advances which have been attained in these important objects."

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The Exhibition is to be divided into two main sections —Health and Education. Six groups of subjects are included in these two divisions. 1, Foods; 2, Dress; 3, Dwellings; 4, Schools; 5, Workshops and Factories; and 6, Educational Wants and Appliances form these groups, and present us with a comprehensive programme, serving for the easy classification of exhibits, and for the detailed examination of the various products and inventions proper to each. The exhibits in each department will be large and varied; indeed, there are no subjects which, more readily than Health and Education, lend themselves to extensive illustration. One result of this great exhibition which alone will advance sanitary science in no slight degree will take the form of instruction in the ways and works of our neighbours in health-apparatus, and in means for the prevention of disease. America should be able to show a fair and extensive collection of sanitary appliances, for health-enterprise is active in the States. Germany will doubtless send examples of the work of the scientific sanitarians who have done so much to place health-science on a satisfactory basis in that country, while the free interchange of ideas which inevitably results where different systems are capable of being compared and tested, cannot fail to operate beneficially on all the nations which take part in the exhibition. With H.R.H. the Prince of Wales for President, and with an Executive Council, having the Duke of Buckingham as President, and for members such eminent sanitarians and statesmen as Sir James Paget, Dr. S. Buchanan, Mr. Birkbeck, M.P., Mr. Ernest Hart, Sir Joseph Fayrer, Sir F. Cunliffe Owen, Sir John Lubbock, Dr. G. V. Poore, &c., there can be no question of the representative character of the exhibition, or of the earnestness with which its successful conduct will be supervised. Amongst the executive we must not neglect to note the names of Mr. E. Cunliffe Owen as secretary, and of Mr. Trendall as literary superintendent. Those who know anything of the labour entailed in organising and arranging the multifarious details of such an exhibition will appreciate to the full the labours of the last-named gentlemen.

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"Trepanning" the skull (or "trephining," as the operation is now termed) means the removal from the investment of the head, of a small piece of bone. This operation is performed by surgeons in cases of head injury. A remarkably curious discovery has been made in reference to the antiquity of this operation. It seems that the skulls of primitive men have been found marked and incised in such a fashion as to suggest the frequent performance, in past ages, of "trepanning." The operation was performed in the early days of mankind as a means of escape from the "demons" or "familiars" which, in cases of epilepsy, &c., were believed to have taken possession of the body. The pieces of bone thus removed from the skull were regarded as "charms" of great value, and were buried with their possessor when he (or she) "joined the majority." It is curious to reflect how the significance of such an operation changes its character as the ages pass. That which was the "demon" or "evil spirit" of the past becomes the familiar "disease" of to-day.

Original Essays

"Life is not to live, but to be well."—*Martial.*

STORIES OF SCIENCE AND CRIME.

I.

The story of the pursuit of crime by science, and of the detection of wrongdoing by the art of the physician, surgeon, chemist, and microscopic worker, must ever possess a high interest for all who recognise that scientific investigation is a great power in our modern life. In the present series of papers we propose to lay before the readers of Health, some of the more interesting incidents which have from time to time been chronicled in the note-books of medical jurists. If it is urged that the interest which attaches to stories of this nature is of morbid kind, we can fairly set off against this allegation the fact that the due understanding of what science is able to accomplish in the detection of crime is, in itself, an educative means. Few persons can read the report of a famous, or even sometimes of an insignificant, criminal trial without observing how frequently scientific aid is called in to assist the detective in his search after the evidences of crime. It becomes a matter of purely scientific study when we endeavour to follow out the reasonings of science in its actions as the Nemesis of crime, when, by aid of the unerring logic that is based upon the facts it discovers, science tracks the criminal to his lair and brings his guilt securely home. There is a reverse picture to this latter, however, which must also be noted in our study of the means wherewith science aids the cause of right. The freeing of the innocent, and the elucidation of mystery, are tasks which the medical jurist has frequently to undertake. It is no light service to humanity, that, which science discharges when it can ferret out the true causes of the misfortunes of mankind, and relieve the innocent from the stigma of suspicion which may have attached itself, through force of circumstances and the irony of fate, to their lives. Apart altogether from the thrilling and curious nature of the "cases" which fall under the notice of the medical jurist, there is no lack of scientific interest to be found in the details which his experiences bring to view. The byeways of human life teem with records of exceedingly curious nature; and the hale and sound part of humanity may often profitably use such records as means of instruction, not only in the science which detects crime and saves them from harm, but also in the moral aspects of the life, such science tends to conserve.

We shall commence these studies in the romance of science and crime by a study in what may be called "identification." Of all processes in which the public may be called upon to take part, the work of identification is one of the most difficult and tantalising. Occasionally, the identification of the living is a task of extreme difficulty, and still more so is the identification of the dead. The nature of personal identity seems at first sight to be a matter of absolute certitude. But when we are called upon

Prize Medal National Health Society.—Houghton & Co., Practical Plumbers, Inspect and Report on House Drainage. Improvements carried out with all the best and latest inventions. Estimates Free. 21, Sloane-terrace, S.W. Established 1863.—(Advt.)

"The Money Question Considered." E. W. Allen, 4, Ave Maria Lane, E.C. The money question in connection with the State purchase of Railways. "A small pamphlet full of facts." By post, 1½d.—[Advt.]

to identify even a person whom we have known intimately under circumstances of doubt, and when disguises, disfigurement, or death have operated to change the appearance of the subject, the task of definitely pronouncing upon the question of identity may prove to be of extreme difficulty. A well-known French case will illustrate our meaning here. A man named Benoit was believed to have perpetrated a murder in Paris. He was seen in Paris at 2 p.m. of the day on which the murder was committed, by several persons, and then possessed hair of a black hue. At Versailles on the evening of the same day at five or six o'clock, he was alleged to have been seen, but on the latter occasion he was described as possessing fair hair. Laying aside the supposition that Benoit wore a wig,—there was no contention that a wig was used—the important matter of his identity turned upon the question whether black hair could be dyed fair within the limits of time above-mentioned? and such a question was accordingly propounded to M. Orfila, the famous French expert. A Parisian hairdresser of wide experience alleged that the feat was impossible, but Orfila showed that it had been effected twenty-six years previously by Vauquelin, by aid of the bleaching agent, chlorine gas. One part of strong liquid chlorine, mixed with four parts of water, will alter black hair to a dark chestnut hue in two hours, while further applications of this agent render the hair light chestnut, and yellow, or even white. In such cases it has been maintained, however, that the full effect of bleaching the hair cannot be obtained until twelve or even twenty hours have elapsed.

The following remarks and incidents serve to show how puzzling this question of identification may become :—

Allusion has just been made to the difficulty experienced in the work of identification, even by the most intimate relations and friends of the missing person. Many examples of this difficulty may be cited, the indefinite nature of the task arising probably as much from the alteration in appearance produced by the "chilly hand" which sets the features in repose, as from any other cause. The lapse of a few hours after death may effect grave change in the cast or *pose* of the human face, as every doctor knows; and police authorities who have to do with the identification of the dead as well as of the living, are accustomed to receive with justifiable care and caution the statements made by most persons in cases of disputed identity.

A comparatively short time ago, an instance of this fact was afforded in a northern city. The body of a woman of dissolute habits was found under circumstances which rendered the theory of her having been murdered an extremely probable hypothesis. The question naturally arose as to the name and identity of the victim. Several persons were found ready to declare that the body in question was no other than that of M. N., with whom they had daily associated. Interrogated closely upon this point, they still adhered to the exact statement they had made, and their opinion was supported by at least one fact—namely, that M. N. had not been seen in her usual haunts for some days prior to the discovery of the body. Identification in this case seemed to be little short of a certainty, when it occurred to a shrewd police-officer to make assurance doubly sure by visiting the city prison, with the view of ascertaining whether the person in question might not be incarcerated within its walls. His search was duly rewarded by the discovery that M. N. was there undergoing a short term of imprisonment, ignorant of the circumstances under which, like some notabilities of our day, she was credited with being "with the majority" whilst still alive and well. A suggestion gravely made in connection with this case, that the body was that of a certain person A. B., was indignantly refuted by A. B. herself walking into the police-station and confronting her anxious friends.

In the Vice-Chancellor's Court so recently as 1866 a suit was tried, in which the plaintiffs, Holliss, wished to establish the death of a person named William Turner. Turner was last seen alive on the 7th of May, 1865, at Guildford. He then presented an emaciated appearance, his mind was weak, and he was unshaven and suffering from boils and sores, which were dressed at the last-named place. Now, on the 17th of May a body was found in the River Wey. At the inquest, which was summoned on the 17th, two men named Etherington swore to the corpse as being that of their father, who was missing at the period in question. The persons who saw and spoke to Turner at Guildford, on the other hand, declared their belief that the body was his; but it was nevertheless buried as that of Philip Etherington. On the neck of the drowned man a coloured neckerchief was found. Some months afterwards, Philip Etherington, the supposed drowned subject, walked into his daughter's house. The question "who was the drowned man?" was then revived. The proofs were clearly brought out at last. William Turner had left behind him at Guildford a fragment of a handkerchief. This fragment being found to correspond exactly with the article removed from the neck of the drowned body, and the fact that the wounds of William Turner had been dressed at Guildford, recalled to mind the fact that traces of such disease were discernible on the drowned man. To the Vice-Chancellor's mind the chain of evidence was complete and satisfactory, and judgment was accordingly given establishing the identity of William Turner and the drowned man. Yet, the two sons of Philip Etherington were positive as to the identity of the body with their father. That person must, of course, have remained utterly ignorant, during his absence from home, concerning the quandary into which that absence had led his friends and others.

A curious case was tried at the Warwick Assizes in 1805, where a suit was entered by the relatives of a drowned man to annul a commission of bankruptcy on the ground that, being already drowned when the commission was issued, it was void in law, and the creditors would therefore have no power to seize the property of the deceased. The man was last seen alive on November 3; legal proceedings in bankruptcy were taken out a few days after this date, and on December 12 his body was discovered in a river. Five weeks and four days had therefore elapsed between his departure from home and the discovery of the body. No doubt was cast upon the identification in this case, and the question before the court turned upon the date of death by drowning. How could the date be fixed? Nature in this case afforded a means of at least approximating to the date in question.

As part of the chemical changes which the human body undergoes in the course of its decomposition in water or in damp soil, a peculiar substance called *adipocere* is formed. This substance is, in fact, a kind of soap, ascertained to result from the union of the fatty acids of the body with the ammonia also derived therefrom; and when thus converted into adipocere the body may retain its condition for lengthened periods of time. The Warwickshire case of the drowned bankrupt exhibited in part the chemical changes resulting in the production of adipocere, and the natural question, "How long does this substance take to form?" came to be raised. Medical evidence adduced at the trial showed that a period of about six weeks was, at the very least, necessary for the production of adipocere, whilst a very much longer period was required, as a rule. This evidence tended naturally to cause the jury to extend as far as possible, and as far as was consistent with facts, the time the body had lain in the water. This opinion led to a verdict for the plaintiff, which, of course, was founded on the belief that the person must have been dead during the whole, or nearly the whole, six weeks.

But more remarkable cases showing the puzzling circumstances which surround identification await our further perusal and consideration.

COTTAGE HOSPITALS.

THEIR FURNISHING (*Concluded*).

By G. A. Gibson, M.D., D.Sc., F.R.C.P.E.

FIFTH PAPER.

The nurse's room should be furnished with every care, remembering that upon her health will depend in a great measure the welfare of the patients. Especially would we urge the provision of an extra-comfortable couch and the easiest of easy chairs, so that in leisure moments she may snatch a little rest at odd times. It will be well also to provide a warm dressing-gown and slippers for night use, as she will often be called out at such times.

The wards should have no carpet save a narrow strip at each bedside to prevent chilling of the patients' feet as they step out of bed. Lockers should be put up in the wards for the reception of the clothes and other articles belonging to the inmates, and the most convenient position for these will be found to be the window-recesses below the level of the sash. The tops of these lockers form very convenient tables for medicine bottles, &c.

The beds are doubtless the most important pieces of furniture in the wards. The bedsteads must be of iron. We feel it a duty to state that of all hospital bedsteads which we have seen we greatly prefer those made by Mr. Thomas Allen, of Bristol. A sketch (Fig. 1) is annexed of

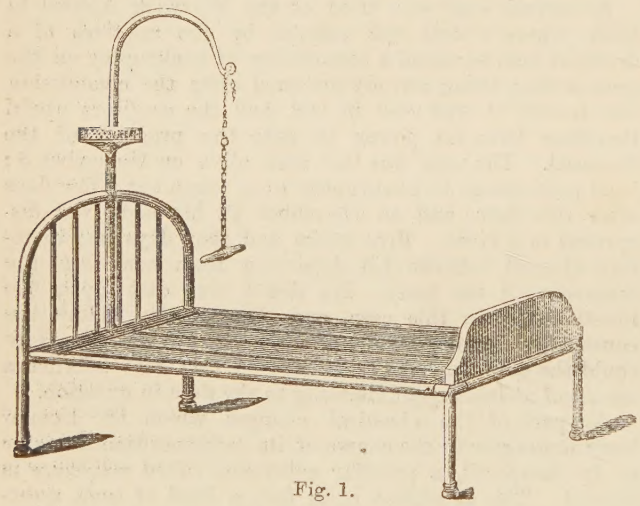

Fig. 1.

such a bedstead. The bottom is formed of pitch-pine laths, which confer a high degree of flexibility upon it, and a certain amount of disinfecting power. The foot-board is of polished timber. At the head of the bed is an iron upright which curves forward and supports a chain, to which is fixed a polished wooden bar as an aid to weakly patients in moving in bed.

Mr. Allen has brought out a portable bed-table for invalids, one of which we would earnestly recommend for use in each ward. We give a drawing of it (Fig. 2). It is an ingenious article, and can easily be fitted to the bedstead.

The ward should likewise have a bed-rest for any patient who requires it. Mr. Allen's is, we think, the best form, and its design can be seen in the accompanying illustration (Fig. 3).

Each ward should have at least one easy chair, with a low, broad seat and sloping back. A screen is absolutely necessary for each of the wards, not only for certain cases of disease, but to ensure a degree of privacy for any of the patients who may be hopelessly ill.

If the wards have not the closets which we recommended attached to them, it will be necessary to have a dry-earth commode in each; for there will be many patients who could go as far as the attached closet, but could not reach one in a distant part of the hospital. And, lastly, the ward should have a charcoal filter.

The special or private ward should be provided with the same articles of furniture as the other wards, only differing in regard to its being a single-bedded room.

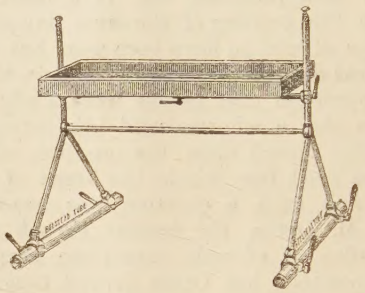

Fig. 2.

The principal feature of the operating room will be the table for surgical operations. It should be simple in design, not such an elaborate effort of mechanical ingenuity as some of those we see, which recall memories of the "combined table and steps," described in the comic pages of "Out of the Hurly-Burly." There must be a baize-lined cupboard or case for keeping the various instruments, and in the operating-room may be kept the steaming apparatus, hot bottles, and similar articles, along with the nurse's dressing-tray. This last-mentioned and most useful thing should be provided with compartments to hold Macintosh and gutta-percha sheeting, lint, strapping, bandages, sponges, silk, and simple instruments. Lastly, in the operating-room the medicine-chest may find a place, as there will be ample room for all the preparation of medicines required by six or seven patients without a separate surgery.

Of the various appointments of the kitchen, laundry, and store-rooms, we need not speak, except to make one

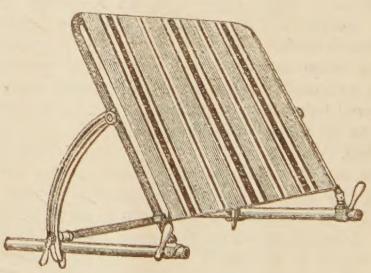

Fig. 3.

single remark about the kitchen. In the winter season especially, the convalescent patient may prefer to sit in it rather than in the day-room, and therefore it must be a bright and cheerful room. Some article of furniture resembling the old-fashioned English settle might be provided, so that in the evening the patients might rest on it before the fire, to which it might be drawn forward.

The mortuary demands a few words. Its walls and ceiling should be covered with enamelled tiles, carefully cemented together, and the floor should also be of some highly-polished material. In addition to the slate table for the performance of any *post-mortem* examinations which may be allowed, there ought to be a slate shelf at one end of

the apartment, where the dead may rest until the relations bear them away.

In the case of a coroner's inquest, the jury may be accommodated in the day-room, where also meetings of the hospital committees can be held.

HOW TO BECOME THIN OR FAT.

By a Surgeon to Several Metropolitan Hospitals.

SEVENTH PAPER.

The *prognosis* or prospect of the case will depend upon the condition of the patient, the gravity of his symptoms, and the presence or non-existence of complications. From the time of Hippocrates, it has been well known that fat people's lives are uncertain, and that they do not, as a rule, bear injuries or operations nearly so well as thin ones. Should an acute inflammation or a fever attack these people, the chances of recovery are poor, and, when recovering, their convalescence is usually prolonged; but if during their illness the fat disappears moderately quickly, and the action of the heart and other organs is good, the prospects are very favourable.

A few words as to the mental powers of fat people. Dickens, as is well known, portrays them as dull, sleepy, phlegmatic, cold, unlovable, greedy, and with sluggish wits; but this is, in my experience, not the rule, as the majority of fat folk with whom I have had to deal have been of a bright, jovial disposition, and of keen wits. History tells of Epaminondas, the general, who was enormously fat, and who was somewhat unfortunate in his married life, having as his sole offspring his two celebrated victories.

Another well-known historical personage, William the Conquerer, was enormously fat, and died from erysipelas caused by a wound resulting from a fall from his horse. He, certainly, had no lack of military ability. Many other instances of fat and clever people might be adduced, but it will suffice to mention a few distinguished literary and historical names to disprove the popular error as to the stupidity of obese individuals. Dr. Johnson, the great *littérateur* and lexicographer, Balzac, the distinguished French novelist and essayist, Louis XVIII. of France, and several eminent German scientific men may serve as illustrations, and there is at present an English physician weighing over twenty stone, who is second to none in his great mental capacity, versatility, and brilliant power of writing and speaking. The notorious Claimant, who was very fat, was certainly anything but a fool.

We now arrive at the question of *treatment*. Having shown that too much food and drink, as well as their indiscriminate selection, and the lack of a proper mode of life, are the chief factors in the production of obesity, and having pointed out its prominent symptoms and dangers, I will first explain what I mean by the expression *taking too much food*, then proceed to make plain the objections to previous methods of treatment, and subsequently explain my own.

Excess of food taken, or exaggerated alimentation, means that the quantity of eatables and drinkables introduced into the organism exceeds the quantity necessary to repair losses, and this increase of ingested materials may extend to all the alimentary substances or to only one of them. There is more than one process affected in exaggerated feeding:—1. The elimination (or getting rid of waste products) may increase proportionately to the quantity of food eaten, and, as normally, there is equilibrium between what is taken in and what passes away, the body neither gains nor loses, and such a condition occurs when an excess of food is compensated by an increase of exercise. 2. Elimination does not keep pace with the increased food taken. A portion of the alimentary principles is retained in the organism in excess of what is needed for repair, and the body increases in weight; and (3), the excess of food may upset the digestive and absorptive powers, and in such a case the surplus food would be found in the excretions unmodified by digestion. In each individual there is a maximum limit of digestive and absorptive power which cannot be exceeded without producing corresponding troubles of the general health, and the maximum limit varies for each kind of the simple foods. It is easily attained for the fats and albuminoids, less so for the minerals and for water.

There have been many plans for the reduction of excessive fatness, the more prominent of which have been known under various names, such as the hunger cure, milk cure, medical cure, &c. They may all, however, be divided into three classes:—1, dietetic; 2, medicinal; and 3, drink-water or bath cures. The object of the medicinal plans was to diminish the quantity of fat by the administration of absorbents, diuretics, purgatives, or of certain reputed specifics; and, in consequence of the ill-effects too often following these modes of treatment, they have justly fallen into disrepute, not only only on account of their danger, but because they were not, and could not be, permanent. I may state that I have often been asked about a certain much-advertised modern patent medicine as a cure for fatness, but that I have no experience of it, and certainly should not resort to its use, as physiology teaches that a merely medical plan cannot be permanent, and if long continued must surely be harmful; and though, on the other hand, if the patent medicine in question be merely a catch-penny, it may be incapable of doing either harm or good, and its purchase will then only end in disappointment, and in the emptying of the pocket of the credulous purchaser. It is noteworthy that these secret remedies are always accompanied with directions as to diet, exercise, &c., and the ignorant sufferer in strictly carrying out these directions, and perhaps deriving benefit therefrom gives the credit of it to the medicine, and not—as should be done—to the regimen. I do not so much wonder at people running after patent medicines for this malady, seeing how much its treatment has been neglected by the profession; but I very much marvel when so-called educated people run after cancer-quacks, bone-setters, herbalists, &c., seeing that there are so many able medical men ready at their disposal. There are medicines which are of undoubted service in the general and special treatment of corpulence, but as these are mostly powerful drugs, and as no one should undergo any thorough course of treatment without being previously carefully examined, it would be worse than folly to enumerate drugs which even an experienced medical man would administer with caution.

(*To be continued.*)

Barnes's Impermeable Opium Poultice, an effective and perfectly safe application for relief in neuralgia, gout, rheumatism, painful swellings, and lumbago. Prices by post 1s. 3d. and 2s. 5d. 1 and 2, Trevor-terrace, Knightsbridge, S.W.—[Advt.]

The "Spécialité" Lime Juice, for family daily use throughout the year, has not the usual musty flavour; will not turn mouldy; may be obtained of Chemists and Grocers.—Feltoe & Sons, Albemarle-street, London, W.—[Advt.]

Pure Water is such a vital necessity that, without it, illness is certain. None are more prone to the ill effects when impure than the young. To ensure a pure supply send a post-card to the London and General Water Purifying Company, Limited, 157, Strand, London, W.C., who will return particulars post free.—[Advt.]

The Family Circle

"The child is father of the man."—*Wordsworth.*
"In bringing up a child, think of its old age."—*Joubert.*

HOW TO CLOTHE CHILDREN.

By Ada S. Ballin.

PART II.

The flannel vest should then have over it another made in the same way, but with sleeves to the wrist, and more than one of these can be put on if it is very cold; all should fit carefully round the throat. I have seen very nice vests for infants knitted of fine wool; these have the advantage of stretching with every movement, while they are warmer than flannel, since they cling closely to the figure. They may be made in the way described, and used either as vests or as wraps under the robes. If the child is thoroughly warmly dressed underneath, the mother may use a robe of any material she likes; but I strongly deprecate the habit of dressing a child in thin clothes in cold weather, and then wrapping it up in a shawl, which cramps its movements, or keeping it near the fire, which makes it very liable to take cold directly it is in a cooler atmosphere.

Infants should not be kept at home because it is cold, but should have on warm outdoor things. A very pretty and cheap outdoor garment for a child of any age up till five or six may be made of white rabbit-skins. For infants this should reach two or three inches below the robe; for short-coated children it should reach the bottom of the dress, that is to say, to the ankles. Both this and the summer cloak should have sleeves so as not to impede the movements of the arms, as capes do, and should fasten down to the bottom. Capes are very undesirable, since (1) their weight hangs from the neck and shoulders, being unevenly distributed; (2) they open and leave the chest exposed; or (3) allow the cold air to get up underneath them and attack the armpits and chest. Hoods should always be worn, as very young children suffer much from earache, especially baby-boys, whom "*pestilent custom*" condemns to have to wear unprotecting, stiff, and uncomfortable hats. They may be made to match the jacket, or either knitted or crocheted in white wool, in either case lined with white sarsenet, as coloured materials should not come in contact with the skin, for reasons which I am going to explain later on.

While I am on the subject of out-door garments, I should like to say a few words as to the mode of out-door exercise for children who cannot yet walk. I am sorry to disagree with Dr. T. Goodall Nasmyth (see Health, No. 21, p. 329), inasmuch as I think it better for children to be wheeled about in a perambulator than carried in the nurse's arms. If they are properly dressed, I do not think there need be any fear of their thus being more liable to take cold. If the child is carried, it is usually cramped by the nurse's arms and frequently held in unnatural positions, as with its head hanging over the arm, so that a spectator fears the neck may be dislocated, or with its feet turned inwards, &c. The nurse, finding the child heavy and that she gets tired, curtails its outings, and instead of spending several hours in the air, as it ought, the time dwindles down. Then, again, if the child is carried, it may inhale the exhalations of the nurse's body, which are not always of the sweetest, and of her clothes, which are not always of the cleanest. But when I recommend perambulators, I do not mean the old-fashioned and, unfortunately, still very prevalent kind, with a seat, and a strap across to keep the baby in; where the head most often hangs over the side of the machine, or the body tends to collapse in a heap on the floor of it. I mean one of the light four-wheeled machines now coming into use, where the infant can recline at full length, or the older child can sit up without restraint; which has no seats, but a sort of mattress at the bottom, on which the child can either lie or sit; which runs with but little vibration on indiarubber-cased wheels, and is sheltered from wind and rain by a hood. For wintry weather a fur rug may be placed in these, effectively protecting the infant from the cold.

A word now about bed-clothes, which should be light, and never tucked in so tightly as to hamper the child's movements. For cold weather a down quilt is very nice, and the child should wear a little woollen spencer, so that in moving it can uncover the upper part of its body without risk of chill; these may be bought in all sizes from Mr. Addley Bourne, at prices ranging from 2s. 6d., and the mother can easily crochet or knit them if she has a pattern.*

I wish to insist here that infants, or even older children, should never be allowed to sleep in the bed with grown people, as they thus are liable to breathe contaminated air. Further, infants are thus exposed to the great danger of being "overlain."

At an inquest held in St. Pancras, on the 12th inst., upon the bodies of two children who were found suffocated in bed with their parents, the coroner, Dr. Danford Thomas, stated that he held every year between 120 and 150 inquests upon children who had met their deaths in this way. In Birmingham the Borough Coroner held four inquests on the 18th inst. on infants who had been overlain in bed, and he remarked that, in order to avoid such large sacrifice of infant life, cots for children should be provided, as enforced by law on the Continent. The line between the accidental and intentional disposal of infants is allowed to be very indistinct. These facts I quote from the *Lancet* for October 27. Mothers, when they take their children into bed in order to suckle them, should replace them in their cots directly they have been fed.

(*To be concluded.*)

INDIARUBBER OR CAOUTCHOUC.

In consequence of the great demand, of late years, for Indiarubber or caoutchouc, a considerable amount of attention has been given to discover or develop new sources of this useful article, some of which promise to be productive of valuable results. The time is not so very long since when indiarubber of commerce was obtained only from one plant, and that plant the *Siphonia elastica*, as it was then called, but which is now known as the *Hevea brasiliensis*, and which yields what is known in trade, at the present time, as Para-rubber, a quality which holds its own for superiority over all others of the numerous sources from whence the elastic gum is obtained. In consideration of the great and increasing value of indiarubber, it may not be out of place to sketch the history of the substance from its introduction into this country, at the latter end of the last century. In the preface of a work treating on the art of perspective, published about 1770, we find the author thus speaking of that which is now an accessory to every ink-stand:—"I have seen a substance excellently adapted to the purpose of wiping from paper the marks of a black lead-pencil. It must, therefore, be of singular use to those who practise drawing." The writer then goes on to state where it could be procured at that time, which was apparently at only one place in London, and the price was three shillings for a "cubical piece of about half-an-inch,"

* For particulars as to cradles and cribs see Mr. Nasmyth's article, No. 21, p. 329.

which, he adds, will last for several years. The form in which Para-rubber was formerly brought to this country was alone sufficient to arouse a curiosity as to its origin.

Caoutchouc made its first appearance among us in the well-known grotesque figures of birds and animals, which were not by any means true to nature. No information, however, could be elicited, for several years, as to its origin, other than that it was a vegetable product. The first accurate information was obtained by a French geographical expedition, which, not confining its attention merely to the purposes for which it was organised, cleared up many other difficult points connected with natural history. These observers reported the discovery of great numbers of trees known to the natives as the "heve," which yielded a large quantity of an elastic, gummy substance, identical with the caoutchouc which had been imported into Europe some years previously. The indiarubber of commerce is now, however, as we have before said, furnished by many plants totally distinct from each other, and though a great deal has been done, of late, to clear up the nomenclature of many of them, there are others still that are but imperfectly understood. The Para-rubber, which has been imported in such large quantities that the supply has been getting scarce for some years past, is furnished by *Hevea brasiliensis*, though several other allied species, such as *H. spruceana*, yield rubber more or less abundantly. Wallace tells us that the principal caoutchouc district lies between Para and the Xingui river, the trees being among the largest denizens of the neighbouring forests. They average about 100 ft. in height, and 2 ft. or 3 ft. in diameter. The tree bears a fruit about the size of a large walnut, divided into three one-seeded lobes, which separate or split annually when ripe. The seeds are mottled and shining on the outside, and are similar in shape and appearance to those of the castor oil, but much larger. They are said to be poisonous when raw, but quite harmless when boiled. The macaws, however, devour them greedily in their raw state without experiencing any harm. The tapping of the trees and the collection of the caoutchouc have been so often described that it is needless to enter upon it here. In tapping, however, it may be remarked that the first wounds are always made at the uppermost part of the trunk, by which means the juice is drawn off down to the point of incision, after which another wound is made lower down, and exhausted; and so on until the base is reached. Perhaps the next most important of American sources of rubber is *Castilloa elastica*, a plant closely allied to the bread-fruit tree, and known as the Central American or Guatemala rubber-tree; then comes the Pernambuco rubber, from an apocynacious tree (*Hancornia speciosa*), an order which, besides producing Borneo rubber, has recently revealed many rubber-yielding plants, not only in the East, but also in Africa, both on the East and West coasts.

The "Boncontour" Stay-Belt and other Orthopædic Apparatus, made by K. R. Schramm, Orthopædic Mechanician, 64, Belmont-street, Chalk Farm-road, London, W.—[Advt.]

Sanitary Inspections.—Fee for Survey and Report, in London, 2 Guineas. Estimate given and Improvement Works carried out when required.—The Sanitary Engineering Co., 115, Victoria-street, Westminster, S.W.—[Advt.]

West Green, Tottenham, West Green College for Ladies.—The Principal, Miss Bristed, A.C.P., receives young ladies to board and educate in a thorough English education. Good schoolroom, furnished with all improvements in lighting and ventilation. Separate Swedish desks. Scientific gymnastic classes held twice a week. The pupils' studies are varied by frequent change of occupation and physical exercise. Miss Bristed's pupils have been very successful in the local University examinations. Good garden and tennis court. Prospectus on application.—[Advt.]

Healthy Houses

"A happy home must be a healthy home."—*Anon.*

CONCERNING CLOSETS (*concluded*).

By H. T. Munday, C.E.

When the valve closet was invented a great improvement was effected, but even in its construction the necessity for attention to detail is well exemplified. It consists simply of an earthenware pan, holding the water, which is retained by a brass disc about 3½ inches in diameter, kept in position by the weighted lever attached to the handle. Directly the handle is lifted, the disc or valve opens back into a small recess, which can be readily cleaned, and therefore offers no receptacle where deposit can collect. The contents of the basin pass away directly down the soil-pipe, and if this latter is properly disconnected from the drains at its foot, no other trap is required. Some sanitary engineers, however, prefer to fix another one immediately below the valve, and the ordinary plumber, if consulted, naturally recommends the D type. Of course, this should never be used. The solid 4-inch S-trap is the best to put in, as this is self-cleansing under a proper flush. The basin should be regulated to stand about half full, as this gives a good volume of water to force the trap directly the handle is lifted. The old-fashioned spreader should be discarded, and a flushing-rim all round the basin be provided. This secures a thorough washing all round the pan, every time the flush is put on. When an overflow is provided, it is better to make it discharge directly on to a leaden safe, in which the apparatus stands, and the outlet from the safe must, of course, go into the open air, so as to be always visible. Plumbers, if left alone, will often make this outlet pipe discharge into the soil pipe *below* the trap, and thus bring up foul air under the seat. If the overflow *is* connected with the soil-pipe, it must be trapped and fed by a weeping-pipe coming off the flush, so that the trapping-water is renewed every time the closet is used. Moreover, the valve at the bottom of the basin must be fixed in such a manner that when pulled back it may shut against the mouth of the overflow and so prevent deposit from choking it. The valve closet is expensive, and there is often great difficulty experienced in keeping the valve tight; when this is not the case, the basin is perpetually running dry from leakage. Hence, except on the ground of appearance, there is no particular advantage in its use as against the best kinds of hoppers. The same remark applies to the so-called "wash-out" closets, such as Bostel's "Excelsior," Dodd's, &c. The whole of these are made in earthenware, and the trap, instead of being in the centre of the basin and exposed to the full rush of water, is placed at the side and out of sight. A small quantity of water is retained in a shallow pan to receive the soil, and the flush drives it over into the trap. Hence, the force of the water is so broken that there is always danger that the trap will not properly clear itself, and it is certain it will not do so unless fully three gallons, conveyed by 1½ in. flushing-pipe, is used every time.

There is, however, little doubt that the "hopper" closet as now improved is the best that can be used in any house. It possesses the great merit of cheapness combined with simplicity, but in order to insure perfect and entire removal of the soil from the trap, a large and sudden volume of water is requisite, and this can only be obtained by providing an arm on the pan large enough to take a 1½ in. or 1¼ in. flushing-pipe. The lower the height of the fall of the water the larger should be the flushing-pipe.

In addition to this, it is highly desirable that the flush should be automatic and of a definite quantity sufficient to clear the trap at each discharge. In other words, when the user of the closet pulls the handle, nothing that he can do should be able to prevent a certain volume of water being discharged into the pan. Under the old system, as soon as the handle was dropped the flush ceased, whether sufficient water had fallen to flush the trap or not. There are several patents in the market professing to fulfil these conditions, and one of the best of these is shown in the

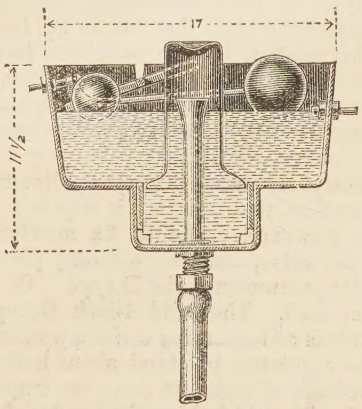

Fig. 1.—Bean's "Waste Preventer."

annexed sectional sketch (Fig. 1). It is known as Bean's "Patent Direct-Acting Valveless Waste Preventer."

A good hopper closet is also shown (Fig. 2), and the two are sold together by the maker, Mr. O. D. Ward, 182, Upper Thames-street. No man can want a more perfect arrangement, and it is used in some of the best houses in the country. In the hopper closet the soil, &c., falls directly into the trap, and is immediately ejected by the full force of the flushing water. The manner in which the paper is

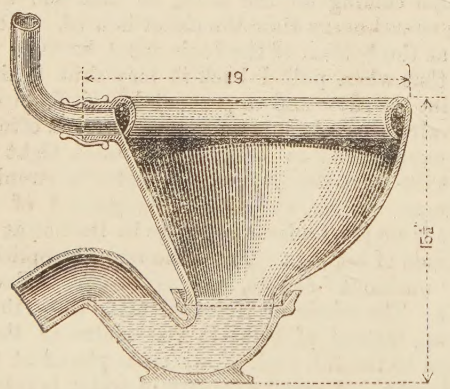

Fig. 2.—"Hopper" Closet.

cleared away is always a good guide as to whether the flush is efficient or otherwise. If it lies in the trap, it is obvious something is wrong either with the flush or the form of the basin and trap. The principle on which the cistern shown in the sketch operates is as follows:—As soon as the handle is pulled, the dome shown over the trumpet-shaped flushing pipe descends and displaces a quantity of water which rushes over the trumpet mouth, driving out the air in the pipe. A siphon-action being immediately set up, the whole contents of the cistern (2¼ gallons) are instantly discharged with great violence into the trap, which is thus thoroughly cleared, and the basin washed out through the medium of the flushing rim. The cost of the closet and waste preventer together is only about £3.

Jottings from the Journals

"Th' ingredients of health and long life are
Great temperance, open air,
Easy labour, littl care."—*Sir Philip Sidney.*

Courtesies of Railway Travelling.—Mr. J. Pridgin Teale, of Leeds, has written to one of the local newspapers to complain that he recently took cold in consequence of a carriage window being left open by a passenger quitting the train while he was asleep. Our sympathies are, of course, with Mr. Pridgin Teale, but that gentleman's experience was not wholly untoward. The cold he unwittingly caught was, no doubt, quite thoughtlessly inflicted upon him by his fellow-traveller, who must be deeply distressed, if he reads the *Leeds Mercury*, to learn that the consequence of his neglect has proved so serious to a member of that profession which, according to the popular view of things, ought to be proof against the ills it is commissioned to cure. If Mr. Pridgin Teale's letter should induce railway passengers to be more considerate for the comfort of their fellow-travellers, it will do good. In the old coaching days, however, travellers were wont to be even less courteous than they are now. Then it was a favour of very high degree to have a window up or down to suit the convenience of any passenger except the one sitting with his face to the horses and close to the window in question. If one of the other travellers did not wish to be suffocated, he found it necessary to push his elbow "accidentally" through the glass, or in some way to hamper the sash. If, on the other hand, he was fearful of cold, unless he could jerk the sash out of its groove, so that it could not be put down, there was little chance of his being accommodated. Railway travellers are either better mannered, or, in some way, more amenable to reason than the "insides" of the old coaches.—*Lancet.*

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The Propagation of Diphtheria by Fowls.—It has been known for some time that pheasants, pigeons, turkeys, domestic fowl, and the like, were liable to be attacked by diphtheritis. The *Wiener Allgemeine Medicinische Zeitung* informs us that Professor Gerhardt, of Würzburg, has carried out a series of observations for the purpose of determining whether the disease may be communicated by this means, and has come to an affirmative conclusion. In September, 1881, 2,600 fowls were sent from the neighbourhood of Verona to Nesselhausen, in Baden, where there is a great fowl-rearing establishment. Some of them must have been affected with diphtheritis before they started, and in the end 1,400 fowls died of it. In the summer

Snelgrove's Governor Gas Burners.—Save quarter to half the gas bill. 15s. per dozen. Samples 18 stamps. Lists free.—60, Queen Victoria-street, E.C.; and of all Ironmongers.—[Advt.]

Murdock's Liquid Food. — Extract from the *Lancet*. — This American preparation is described as "an extract of beef, mutton, and fruits, containing corpuscles, and 12½ per cent. of soluble albumen." The solution gives the blood spectrum very strongly, and contains so much albumen as to become almost solid with dilute nitric acid. Of course it is an exceedingly powerful and easily digestible form of food. It is calculated to be of the utmost use in medical practice. Among other applications, the use of the liquid food as an enema will strike every one.—Van Abbott, Infant, Invalid, and Diabetic Food and Mineral Water Warehouse, 5, Princes-street, Cavendish-square, London, W.; American A B C cereals and foods generally. Depôt for Brand's (May Fair) Meat Preparations.—[Advt.]

Dr. Nichols' Penny Vegetarian Cookery-Book.—Every household should possess this marvel of cheapness. Free for 1½d.—Nichols & Co., 23, Oxford-street, London, W.—[Advt.]

of last year 1,000 chickens were hatched from eggs collected from many different places. Six weeks after their birth diphtheritis manifested itself among the young chickens, and so badly that in a short time they all died. Five cats that were kept in the establishment also became ill of the same malady, and died. A parrot that hung in a cage in the house was also attacked, but recovered. Last November an Italian hen, while being "painted" about the jaws with carbolic acid by the chief keeper, bit the man's wrist and foot. Presently he became ill with a smart fever, considerable swelling at the wounded parts, and all the symptoms of traumatic diphtheritis. His recovery was very tedious. This was not the only case of the transmission of the disease to men. Two-thirds of all the labouring persons employed about the establishment became ill with ordinary diphtheritis, and one man conveyed the infection to his three children. It is worth noting that during all this time no other diphtheritic cases occurred at Nesselhausen or in the neighbourhood. The inference seems obvious that all these cases originated with the sick fowls.

Our Bookshelf

"Reading maketh a full man."—*Bacon.*

THE EDUCATION OF GIRLS.

Female Education from a Medical Point of View. By T. S. Clouston, M.D. (Edinburgh: Macniven & Wallace.)

This pamphlet contains two lectures delivered by Dr. Clouston, Physician-Superintendent of the Royal Edinburgh Asylum for the Insane, before the members of the Philosophical Institution of Edinburgh. The lectures attracted a large share of attention at the time of their delivery, and their publication in the present cheap and handy form must be regarded as a boon not to educationists alone, but to parents and to all who are in any way interested or concerned in the care and upbringing of girls. The pamphlet was never more opportune than at the present time, when the world is "examination mad," and when true culture and education, and the training of the mind to form an effective instrument of thought is apt to be lost sight of in the ceaseless competition of school with school, and class with class.

Beginning his task by a wide and systematic survey of the medical aspects of education, Dr. Clouston deals with the all-important question of heredity and inheritance as applied to the mental development of individuals. The varied characters of the different epochs of life are lucidly sketched, and the period of adolescence or youth, in its physiological and mental features, is duly dwelt upon as forming the foundation of the arguments which the lecturer afterwards proceeds to build up from the physician's point of view. He has a most interesting passage on the brain-work, and its relations to body and to life-processes at large, which is too interesting to be passed over :—

> The brain is a most complicated organ in structure and function, that regulates the working of every portion of the body, that has certain portions of it devoted to motion and feeling, and passion, and digestion, and body-growth, and nutrition, &c. It is the one organ that dominates all the others, regulating and harmonising all their functions. If one side of it is injured during growth, the opposite side of the body is left stunted and partially paralysed, as well as the mental power weakened. If undue calls are made on one part, the other portions suffer. Now this wondrous, and as yet only partially known, organ has grown most of its growth, in so far as mere bulk is concerned, by the time adolescence begins. But its higher qualities—its force, its power of producing varied energies—are then only nascent. They develop during this period. It is then that the brain needs plenty of rest in sleep, fresh air, pure blood, good nourishing non-stimulating food, and work that develops but does not exhaust. The mental portion of the brain is, no doubt, the highest, and undue calls on that portion exhaust more than any other part. As I said, only a certain amount of energy or work is possible by any amount of stimulation. The brain has most diversified functions, but it has also a solidarity of action. No part is sick without all the other parts suffering. No function is overtaxed without all the other functions being weakened. Overtaxing of the mental function is specially weakening. In mature life, after the body is fully developed, such an overtaxing can be repaired by rest. The injury is merely temporary. If a man overworks his brain in business or study, and gives himself too little sleep, and gets an attack of indigestion, it means that he has taken up the brain energy that ought to have gone towards digestion in mental work. But he stops work, goes to the country, and his recuperated brain soon acquires force enough to stimulate the stomach to secrete its juices and do its work. But if in adolescence, before the bones are knit, and the growth completed, and the feminine nature far advanced towards perfection, if the brain that is in the process of doing all these things is year by year called on to exert its yet imperfect forces chiefly in acquiring book knowledge by long hours of study, and in consequence the growth is stopped, the blood is thinned, the cheeks are pallid, the fat destroyed, the wondrous forces and faculties that I have spoken of are arrested before they attain completion, then, when the period of growth and development ceases, the damage is irreparable. There is no time or place of organic repentance provided by nature for the sins of the schoolmaster. Life has to be faced with an imperfect organism, its work and duties done with impaired forces, and its chances of accidents met without a stock of reserve power. This is a poor look-out for the individual; but when motherhood comes, and sound minds in sound bodies have to be transmitted to posterity, how is it to be then with the future race? This aspect of the question of female education during the period of adolescence is of absolute primary importance to the world. Yet it is wholly ignored in many systems of education. What is the use of culture, if it is all to end with the present generation? What a responsibility to transmit to future generations weak bodies and over-sensitive brains, liable to all sorts of nervous disease! Nothing can be more certain than that the qualities, good and bad, acquired in one generation, are sent on to the next. The world may be all the better of a generation of healthy, ignorant, and happy mothers, who can produce stalwart, forceful sons and daughters (not that I wish this lecture to be an apology for health and ignorance), but the world must be worse for a system of stopping full and harmonious development in the mothers of the next generation. My plea is, that, as nature is harmonious in mental and bodily development, we should follow on her lines, and not set up an educational standard for ourselves that is one-sided, because it takes no proper account of the constitution of the body and brain at all, only considering one brain function—the mental.

There is also a passage of some moment to Dr. Clouston's argument which may also be quoted. Speaking of the duty of "keeping the mental machine a little back," the author says :—

> It will be said, as a hereditary fact, that most great men have had mothers of strong minds. I believe this to be true, but it is not a fact that many great men have had what would now be called "highly-educated" mothers. On the contrary, very few such men have had such mothers. There were usually an innate force and a good development of mind and body in the mothers of such men, who usually had led quiet, uneventful, unexciting lives. I am inclined to believe that, if the mothers of such men had been in adolescence worked in learning book knowledge for eight or ten hours a day in a sitting posture; if they had been stimulated by competition all that time, and had ended at twenty-one by being first prizewomen (as probably most of them had the power of being); if this had befallen them, then, I think, their sons would have been small and distorted men, instead of being the lights of the world.

The great argument for the "higher education" of women is that it "makes them better companions for educated men." But Dr. Clouston, who sets himself in battle array against the strain which higher education involves for the vast majority of women, says, we should look at this view

of matters in the light of the ideal women who appear in literature. He maintains that the best creations of the feminine type in literature do not correspond to the product of the "higher education" of to-day. George Eliot's women—Dorothea in "Middlemarch," Gwendolen Harleth in "Daniel Deronda," are pointed out as examples of typical young women, who, with all their faults, were true to nature. Even Romola, who was a learned woman, "took to love-making, marriage, self-denial, charity, and religion, and deserted her books the moment her duty in them was done." But we are afraid Dr. Clouston's opponents will be ready to allege that there is no reason why the highly-educated woman of to-day should not "go and do likewise." Be this as it may, our author's fear is that the over-education of women during the period of youth has a tendency to interfere with perfect health, and that, in this light, the purchase of culture at the expense of health should not for a moment be tolerated by any true educator. As it is, the physician roundly condemns all such forcing of brain at the expense of body.

Dr. Clouston's account of school-girls' work is it itself an important item :—

As the result of my inquiries among pupils and teachers in the advanced schools for young ladies, I find that about five or six hours of actual school work, and from two to four hours of preparation at home, may be taken as the time that is each day occupied in education. Many of the ambitious, clever girls, in order to take high places and prizes, work far longer than the time I have mentioned in preparing at home, especially if the musical practising is taken into account. At certain times of the year, before examinations, some of these girls will work twelve and fourteen hours a day, and take no exercise to speak of, and but little fresh air. For those who attend the day-schools a somewhat solemn walk to and from school is the chief means the body has of keeping healthy at all. To satisfy the requirements of the brain, and the blood, and the muscles, and the digestion, and the nutrition, and the general growth, we have a girl getting up at seven o'clock in the dark winter morning, dressing, eating a hasty breakfast (as if that was a secondary matter that was too unimportant to waste much time over), having a revise of some special subject learnt the night before, walking to school in perhaps thin-soled boots, and doing the most physiologically profitable thing of the day in the chat and gossip on the way. School and lessons from nine o'clock till two or three, or four often, in questionably-aired, overheated, and dull class-rooms, with not a bright bit of paint or colour in them to counteract the sunless gloom of our Scotch winter weather. Who ever saw a class-room in a school where taste had been exercised in the decoration and painting? In my opinion our school-rooms should be made at least as nice as our drawing-rooms. Then the walk home, a hurried dinner, a little rest, and to work till nine or ten o'clock at night in gaslight. That is the sort of life, and these are the conditions, under which we expect not only prodigies of learning in all the sciences, but sweet tempers and sweetly healthful bodies to be developed. That is the actual treatment to which thousands of our girls are subjected during the most momentous period of their lives, physiologically; when the growth of the body is being completed, its symmetry and perfection are being reached, when the latent energies for a life's work are being or should be accumulating, and when a certain amount of joy and fun and play are nature's best aids to health of body and mind.

There is another class of young women (he continues) who have even a harder lot in many cases, and these are the pupil-teachers in the Board Schools. Their work is, in some cases, simply continuous all day, and part of it is irksome, uninteresting drudgery; their homes are often far from being cheerful, and their food far from being very abundant. I know as a fact that the lives of some of our female pupil-teachers are such that as melancholy a "Song of the School" could be sung of them as Hood's "Song of the Shirt."

The description of the ideal school is also worth quoting :—

If I had a school to construct on ideal principles, I should have it placed on the north side of a large space of ground. I should have it one story only, and every class-room lofty, and with roof-lights to let in as much as possible of our scanty Scotch sunlight. I should have the walls of the class-rooms painted in light, cheerful, tasteful colours, to produce a cheering effect on the minds of the pupils. I should have big, open fireplaces to cheer and to ventilate the rooms. I should have, as an essential adjunct, a great room, where gymnastics, romping, dancing, and play should all have full scope, when the weather did not admit of the girls going out. I should not restrain romping and play, even in girls of eighteen, between classes. Girls between thirteen and twenty will romp well, if they are in health, and there is no pressure put on them that it is not the thing for them to do. I should not have more than four hours of good hard work at school, and two of preparation at home. The fact is, that our scholars lose the benefit for their health of the best part of our Scotch winter days, the forenoon, when we sometimes have both sunshine and dryness in tke air. By the time school is over the day is done.

Concerning the crying question of competition in girls' schools, Dr. Clouston is found to say that :—

One of the practices most energetically relied on in the higher class of girls' schools is that of the competition of one scholar with another. In some of them this competition is terrific. It extends to every subject; it becomes so keen as to put each girl who is in the foremost rank in a fever heat of emulation before the examinations. In some cases it overmasters every other feeling for the time being. No doubt, from the schoolmaster's point of view, it is the very thing he wants. In his professional enthusiasm he aims at the highest mental result. He is not professionally interested in the health or the special nervous constitution of his girls; he does not regard them as each one a medico-psychological entity and problem. I don't say this by way of reproach. All good men try to attain the highest result in their special departments. The educator has no means of knowing the constitution and hereditary weakof his girls—that the mother of one died of consumption, that the father of another was insane, that neuralgia is hereditary in the family of a third, that one has been nervous, another had convulsions when a baby, another has been threatened with water in the head, &c. His own education and training have not taught him to notice or know the meaning of narrow chests, or great thinness, or stooping shoulders, or very big heads, or quick, jerky movements, or dilated pupils, or want of appetite, or headaches, or irritability, or backaches, or disinclination to bodily exertion. But all these things exist in abundance in every big school, and the girls handicapped in that way are set into competition with those who are strong and free from risks. It is the most nervous, excitable, and highly-strung girls who throw themselves into the school competition most keenly. And they, of course, are just the most liable to be injured by it. All good observers say the intensity of feeling displayed in girls' competitions is greater than among lads, and that there is far more apt to arise a personal animus. Girls don't take a beating so quietly as boys. Their moral constitution, while in some ways stronger than that of boys, especially at that age, suffers more from any disturbing cause. The whole thing takes greater hold of them—is more real. It is more boys' nature to fight and forget, and take defeat calmly. Girls, I believe, suffer, when the competition in schools is too keen, in their tenderness of feeling and in their charity. They tend to attribute unfairness of motive to their teachers far more than boys, just because their affective nature is and should be stronger than their reasoning power.

In his further remarks, Dr. Clouston maintains that there is a real danger in the work of education being made, as it undoubtedly is, of a pleasant nature. The seductiveness of studies tends, he says, towards mental surfeiting of a dangerous kind; and there is no question that in the main the author is correct. He would have physical exercises taught in girls' schools, and he shows incontestably that the beauty of the female form can only be attained in the presence, and by the aid of, rich pure blood, in the production of which pure air and exercise are all-important factors. He would also have a periodical testing of a girl's growth and bodily progress :—

While education is going on, a regular periodic testing of the bodily growth and condition should also be carried out in the case of every girl. Her rate of growth should be marked by a notch on a stick every quarter. As regularly as the school fees are paid her weight should be taken, the colour of her cheeks and lips should be looked at and noted, her appetite and digestion should be looked to her habits of activity or otherwise should be observed, her power of sleeping should be noticed, the mode of growth should be observed —*e.g.*, whether her chest is expanding, whether her shoulders are

sloping or stooping, whether she is soft or firm in the flesh, &c. Her general mental condition, whether she is frolicsome or irritable, enthusiastic or sluggish, selfish and grudging, or not, is of great moment as an index of the general brain condition. Of course, anything like disorder of health, or pain, or sleeplessness, or want of appetite, or pallor, or thinness, should be at once attended to before they go to far. The great thing is to stop the beginnings of evil. If a girl has grown a couple of inches a year, then depend upon it she should not study hard. Nature has enough to do in such a case to firm up the body in proportion to its bulk. You want not only growth, but activity, grace of moment, alertness, strength. You won't have these if the girl goes on studying hard while she is growing fast. On October 1, I weighed and measured three children of one family, two boys and a girl, on their return to school after the holidays, and on November 30 I again did so. The boys had each gained four pounds in weight and grown half-an-inch, the girl had neither gained nor grown. The boys had had lots of play in the open air between lessons, the girl had been five hours each day continuously in school. The boys' class-rooms had been built for a school, the girl's class-rooms were in a small private house. If growth and increase in weight stop too soon, a wise parent will send off her daughter to the country to run to grass for a time, to see if mental inactivity will restore the body growth. If she is getting thin, let her live out in the open air, instead of in a school, till her appetite becomes ravenous, and she puts on flesh.

There can be no question that such practical advice is much needed, and every parent should lay Dr. Clouston's words to heart. His concluding words are full of power :—

I went last July to see the examination and distribution of prizes in a very large city school for young ladies. While the young girls there were very many of them fresh in complexion and plump, I must say that the majority of the girls above thirteen seemed to me jaded, and pale, and unduly thin. I did not see a dozen pairs of rosy cheeks in a hundred of them. To my eye, many of them bore very evident signs of over-brain work and deficient physical energy. They didn't look joyous and full of animal glee, as girls at that age should look. Like Dr. John Brown's terrier, "life was too full of seriousness" to them. Two Sundays after I was in a country kirk in the far north, where modern educational systems are as yet unknown, and I contrasted the appearance of the farmers' daughters there with that of the prize-winners in the city school. The difference was absolutely astounding. I only wish I could convey the impression I received in both cases from a critical doctor's survey of both sets of girls. If the one set exemplified health, robustness, organic happiness, strength, resistive power against disease, and potential motherhood, then beyond a doubt the other set did not fully do so. The question of the future is, How can we get, or how much can we get, of the intelligence and book-culture of the latter, combined with the health of the former? The health we must have, for it is requisite for the life of the race; the culture we must have in such degree as is consistent with the health.

Altogether such a powerful appeal to the good sense of the nation at large in the matter of "over-education" has not been heard for many a long day. These lectures deserve to be read and studied by every teacher and by all parents. They bristle with suggestive facts, as our quotations will show; and they constitute at once a defence of true education, and a trenchant criticism of the "cram" that too often does duty for culture. The motto of the sanitarian is the "beauty of health;" and Dr. Clouston, in telling us that our girls had better be healthy, happy, and long-lived with even moderate culture, than short-lived, over-educated units of society, is only re-echoing, in his own powerful fashion, the teachings of true science.

Sanitary Appliances, Etc.

MESSRS. BRAND & COMPANY'S FOOD PREPARATIONS.

It is almost superfluous to notice the high place and reputation which the house of Messrs. Brand & Co., of Little Stanhope-street, Mayfair, London, W., has assumed and obtained for the excellence of their various food preparations. Year by year, the fame of this firm has extended, until their productions have become noted for their uniform purity and strength, and for the reliance which medical men are accustomed to place upon them in cases where nourishment in a readily digestible form requires to be administered speedily and with ease. We have frequently had occasion to recommend the use of Messrs. Brand's preparations to those of our correspondents who have inquired of us the best means for giving the stomach and digestive organs that needful rest, which, in dyspepsia and allied disorders, forms the sheet-anchor and basis of rational treatment. In administering foods which are adapted to sustain the body readily and fully in the absence of solid and accustomed nutriment, it is needless to remark that the purity and strength of the condiments used form the first consideration of both the invalid and medical man. On both qualities of Messrs. Brand's preparations the strictest reliance can be placed. From a careful analysis of most of their manufactures, we can fully confirm the high and favourable opinion which the medical profession has formed of their excellence.

Of the products of this firm, the "Essence of Beef" is that most widely known. Prepared, unlike most of these essences, from the highest class of English beef, the purity of this essence is assured. The beef from which the essence is manufactured is carefully inspected by duly qualified hands, and each stage of its manufacture is supervised with the care of the practised chemist. The result of this care is the production of an absolutely pure essence of beef, of a clear amber colour, agreeable odour, &c., as proved by analysis, containing all the nutritive principles of the meat. Dr. Druitt expressed his opinion of the nutritive powers of this Essence of Beef, as compared with those of brandy, in the following words :—

"The object of my bringing it under the notice of the Obstetrical Society was to advocate the use of it as a partial substitute for brandy, in the treatment of the consequences of hæmorrhage, and other states of exhaustion incidental to the puerperal state. It will not supply the place of brandy during the early and urgent states of exhaustion from loss of blood, though, even then it is the best auxiliary; but it does very largely supply the place of an alcoholic stimulant in the treatment of the after stages, when the brain is suffering from anæmia, and when the patient complains of headaches, giddiness, and despondency, particularly in the early part of the day. It is equally valuable in states of mental depression arising from other causes, such as grief, mental shock, &c., in which the usual resort is wine or brandy. It may be taken as a stimulant after breakfast, at the time of the day when nervous feelings are most distressing, and when alcoholic stimulants are most pernicious, and most likely, if used at all, to lay the foundation of injurious excess. Out of the vast number of drunkards there are a few whose intemperance has followed the use of wine for the mental depression caused by anæmia. Bodily weakness alone does not tempt to drinking, except when it is attended with mental despondency; but with that combination it does tempt most strongly. But the 'Essence of Beef' (Brand's), freed from the grosser gelatinous particles, is directly absorbed, and exhilirates the brain specificially, causing the same phenomena, in a slight degree, as brandy does. It is in cases such as this, as a substitute for brandy, and as a means of preventing habits of drinking, and of curing them, that I more particularly recommend its use to my professional brethren. One tablespoonful taken early in the forenoon, with or without a little bit of crust and a mouthful of wine, gives the brain a something that relieves it from nervousness and vapours. It should be given, not as food at meals, but in the guise of medicine between them.

"In dyspepsia, likewise, it is a capital remedy, and one infinitely preferable to 'Pepsine,' as I venture to think. There are very many cases of general debility and emaciation, in which a gelatinous soup is preferable; but in the cases in which a nutritive stimulant, without bulk, is required, as in that hopeless disease called 'old age,' your readers may find that this liquid is a valuable addition to their stock of remedies. It may, if required, be flavoured with a little dill water or camphor, and administered out of a medicine bottle."

Of the other preparations of Messrs. Brand, of which we are able to speak in high terms of commendation, are the "Concentrated" brands of Beef Tea; Veal, Mutton, Chicken, and Turtle "Broths," and the "Turtle Soup and Jelly." A long list of tinned soups, all of excellent quality, is contained in the catalogue of the firm, and we have been especially pleased with the "Essence of Malt" prepared by Messrs. Brand. This is a concentrated essence of pure malt, preserving the aroma of the malt and its active principle. This essence will be found an efficient substitute for cod-liver oil, in cases where the oil cannot be taken, and by children especially the malt extract is much relished. Not the least ingenious invention of this firm is found in the "Savoury Meat Lozenges," which form a portable nourishment, well adapted for all who are removed for a time from ordinary sources of nutrition. In these days of trade com-

petition, when so many worthless food compounds are sent into the market, Messrs. Brand's products stand out conspicuously in the first rank of such manufactures. No higher recommendation can be accorded them than to say that they are of the finest possible quality, and that, for purity and freedom from all extraneous materials, they cannot be excelled.

Our Letter : Box

"Conference [maketh] a ready man."—*Bacon.*

NOTICES TO CORRESPONDENTS.

All Communications for the Editorial Department (including specimens of Sanitary Appliances, &c.), to be addressed to "The Editor of Health," 74-76, *Great Queen-street, London, W.C. Those intended for the Publishing Office to be sent to* "The Publisher," *at the same address.*

Contributors are requested to send stamps for the return of the MSS. *in event of non-acceptance. Every care will be taken to ensure the safety of* MSS., *but the* Editor *and* Publishers *cannot hold themselves responsible for accidental loss.*

Correspondents are requested to write on one side of the paper only. The Editor *disclaims responsibility for the opinions expressed by Correspondents.*

LETTERS TO THE EDITOR.

COLD AND COLD FEET.

Sir,—Allow me to bring under your notice a simple means whereby much suffering or inconvenience can be done away with this cold weather. All the year round, parents insist on their children washing in cold water. In spring, summer, and early autumn this is a good proceeding; but, when winter comes on with its cold and frosty nights, I do not think it at all desirable to allow our children, or even ourselves, to turn out of a warm and comfortable bed into a basin of ice-cold water. A good deal of bodily heat is thus lost; and in many cases, where the circulation is at all weak, the fingers may be numb for some time after, and the child unable to button his collar or fasten his clothes. This is a picture I have seen many times, and have vivid recollections of helping to fasten on a playfellow's collar many a time because his hands were so numb he could not do it himself. The fingers of such persons turn white, the nails purple, and the hands are cold to the touch and have little or no sensation in them—in other words, the circulation is almost stopped on account of the cold. I recollect as a school-boy having cold hands after washing in winter in cold water, but I remedied this by putting my hands in the warm bed from which I had arisen; I was then able to go on dressing. The remedy is to allow our young folks a small jug each of hot water, just sufficient to take the chill off the cold water. In the case of a school, a servant could go round and pour a sufficient quantity in each boy's basin just before he gets up. The result would be magical; instead of seeing boys coming into prayers shivering and blowing their fingers, they would come in cheerful; and, instead of having to sit in the study with their hands in their pockets to get them warm before being able to write, they would set to work as soon as they got down. I may say the same with regard to grown-up persons. It is, no doubt, very nice to be able to plunge into cold water; but there are many who find that the morning wash is anything but pleasant, and who have in consequence much work with buttons which their benumbed fingers cannot fasten. To these, a little warm water will be a great boon; and it is very easily got wherever there is gas, or an ordinary paraffin lamp will quickly heat sufficient. This is also a good plan where a sponging down is taken each morning. I have mine daily, and find I enjoy it as much as ever, though I do take the chill off the water. My inquiries amongst ladies tell me that nearly all of them use warm water in the morning, and I commend them for it. Such a plan would be unnecessary if we got up and had a good walk or some sharp exercise before proceeding to wash; then the blood would be circulating freely, and we should not feel the cold. Another topic is that of cold feet whilst in bed. This is a very common complaint, and one that causes a great deal of sleeplessness—first, on retiring at night; and again, early in the morning we are awoke by cold feet, and cannot get them warm except by drawing them up almost to the chin. This occurs not only in the young, but in the middle-aged and the old. There are two remedies—the hot bottle and lamb's-wool socks, either or both of which may be used. When we consider that during the day, whilst we are active, we wear stockings and shoes, does it not seem strange that at night, when the temperature of the air is lower, and when we are inactive, that our feet should have less covering than during the day? The reasonable plan is to have a special pair of socks for night use, put them on when going to bed, and change them when we get up; the result will be better and more serene sleep, consequently we shall be more able to undergo our daily exertions. I say at once, to all who suffer from cold feet, get a pair of warm socks, and keep for night wear. A good walk for half an hour before retiring warms the feet, and sends a nice glow all through the body, and disposes to sleep. Readers must not imagine that these remedies make one less able to stand cold—they are simply to retain the heat of the body and allow of comfort, and, if followed, much benefit will be obtained. T. R. Allinson, L.R.C.P., &c.

34, Claremont-square, N., Nov. 14, 1883.

ELECTRO-DENTISTRY.

Sir,—In reply to Dr. Wedgewood, I beg to say that the electro-denture was not my idea, but was suggested to me by J. McOscar, M.D. I designed and made it. At the time I thought it likely to be of so much use that it was my intention to bring it to the notice of the Odontological Society, but I was dissuaded by Dr. McOscar until it had been sufficiently tested. The results I found too unsatisfactory—from a medical point of view, at any rate—to permit of my bringing it, as a denture of any practical value electrically, before the Society. Dr. McOscar, whose experience as a medical electrician, and whose knowledge of the science of electricity rendered his opinion valuable, was of the same opinion as myself. Moreover, there was considerable risk, in the very few cases in which a useful current of electricity might be generated, of the mucous membrane, at the points of contact between the mouth and battery elements, becoming sore from the continued action of the current, the current in some cases producing a sensation of burning at these points of contact. The same trouble is sometimes produced even on other parts of the body by the use of some of the electrical appliances when worn continually. This difficulty might to some extent be got over if the patient were in a position to afford a duplicate and *non*-electro-denture, which could be worn alternately with the other, thus resting the mouth.—I am, Sir, yours very truly,

C. J. Boyd Wallis, L.D.S., R.C.S. Lond., &c.

P.S.—Since writing the above, I have discovered that neither I nor Dr. Wedgewood was original with our invention, for I have just been informed that precisely the same thing was introduced over twenty-one years ago by a West-end dental surgeon, and his electro-dentures were constructed according to the suggestions, and by the aid, of Mr. Piggott, a medical electrician. A copper coin, coupled with a piece of zinc, and placed in the mouth, will in some cases exhibit a higher E.M.F. than that named by Dr. Wedgewood; and, indeed, there are people who, when placed in circuit with a galvanometer, would exhibit a polarity of 10 deg. without a battery at all. A patent for what was termed "Perkins' Tractors" was taken out fifty-five years ago. They were composed of elements of zinc and silver, and were for the purpose of increasing the flow of saliva, being placed in the mouth at the pleasure of the patient. The E.M.F. of such arrangements in the mouth may vary considerably, from almost *nil* to a comparatively high E.M.F., according to the acidity or alkalinity of the oral secretions. Electro-dentures may with some people become positively injurious, inasmuch as in cases where the saliva is very acid or very alkaline they would aggravate the very trouble they were intended to remedy—at least, so far as dyspepsia is concerned.

C. J. B. W.

QUERIES AND ANSWERS.

[Correspondents will please note that Queries addressed on Post-cards are consigned to our waste-paper basket. If information is worth having, it is at least worth a letter.]

GENERAL.

C. Bedlake.—A technical term for a part of the brain situated at the top of the spinal cord.

Eastern Gent.—We do not know the firm.

G. Otley.—The food is highly commendable.

G. Atkinson.—See an article in a former number on "Plants in Bedrooms."

D. A.—Try the first-mentioned.

B. G. O.—Sanitas oil should suit your purpose.

Elder, J.—An attempt to extort money. Resist it.

E. Noaks.—We think the system well adapted for you. Much

of success depends, of course, on individual capacity. Of all the systems we know it is the best.

Philan.—The book has long been out of print, and we learn the author has no intention of reprinting it at present.

E. F. G.—1. We intend shortly to begin our "Ambulance Lectures." 2. Yes; separate inquiries should be written on different sheets of paper. Same signature will do.

SANITARY.

O. M.—Goître, or "Derbyshire neck," is believed to arise from excess of minerals in drinking-water; but it is due probably to a combination of causes rather than to one cause alone.

A. Lancing.—Dr. Parkes gives about twelve gallons of water daily as the quantity used by a man in the middle classes:—cooking, 0·75 gall.; fluids as drink, 0·33 gall.; ablution, including bath, 5 galls.; utensil and house, 3 galls.; and clothes-washing, 3 galls.

B. G. C.—Try the second mentioned in your note. It is tolerably free from all defects.

T. Fisher.—We agree with you, but don't see how infection can be prevented. You cannot separate the clothes, any more than you can isolate the children from one another. Health here, as elsewhere, begins in the homes of the parents.

MEDICAL.

Dundas.—In such a case, and considering the advanced age of the patient, we should decidedly recommend you to see a good surgeon, who will be able to recommend means for relieving the pains, if not for curing absolutely. These ulcerations require careful and constant medical attention.

D. F. E.—We can send you the address you require on receipt of a stamped addressed envelope. In sending it please restate your inquiry.

Zuroff.—See and follow advice given to "Harry," in No. 34 of Health, and try the tonic for a time therein prescribed to "T. Fraser." You must give up all stimulants.

Beta.—Try the effect of taking "cod-liver oil cream" (to be had of Mr. Thomson, chemist, Dublin-street, in your city) for a time. There is probably nothing wrong; only, during all winter, clothe warmly and avoid chills. Don't eat late at night. Glad to advise again, if need be.

A Friend of Health.—The case is one of a stubborn disease, which often resists for a time all treatment. The administration of cod-liver oil, in small quantities after food, should be tried, and the following ointment may also be applied:—Oil of cade, two drachms; glycerine of starch, to make up one ounce. If not improved, write again.

J. F. S.—Yours is merely a case for rest, quiet, and strict attention to all details of general health. Don't get hypochondriac; and for a week or so take a teaspoonful of Fellows' "Syrup of the Hypophosphites" in a wineglassful of water after meals. Let us hear from you thereafter.

Chilblains.—Read our article on "Cures for Chilblains," in No. 30, Health, in which a large number of receipts are given.

Spero.—Give up the dumb-bells permanently, and also the morning bath for a time. You have not sufficient reaction. Take more open-air exercise, and avoid reading or writing at night. The eye-troubles will disappear when your general health is re-established. Take also the tonic recommended to "J. F. S." above.

A. Scott.—1. Try Maignen's "Filtre Rapide" (22, Great Tower-street, London, E.C.). 2. No lotions are of service. Attend to general health; cleanliness; and use a little pure Vaseline at night. 3. Yes. 4. No, not if used wisely and not too much taken. If you feel dyspeptic, replace the morning tea by cocoa or plain milk. 5. Depends on individual experience and constitution; if alcohol be taken at all, it should be taken at dinner.

Spero.—You were replied to in No. 34, Health. Read our "Notices to Correspondents." Your inquiry could not be answered in the week in which it is received.

Granule.—The treatment, so far as we can see, is appropriate enough. Yours is a case for general constitutional tonics, such as change of air, &c. Cod-liver oil, with syrup of iodide of iron added, might be taken for a time after food. In your case, consultation with a specialist in skin-diseases should benefit you, as you would probably be prescribed medicines which require care and supervision whilst they are being taken. Glad to be of any further service, if necessary.

John Fanny.—The person you name is a duly-qualified medical practitioner.

E. Manton.—No need to "despair." See and follow advice to "Harry" in Health, No. 34, and take the tonic therein recommended to "T. Fraser."

Harry (No. 2).—See advice to "Harry," in Health, No. 34. The tonic recommended to "J. F. S." in present number of Health should suit your case thoroughly. The "belts" you name are genuine articles, and may safely, we think, be tried. Glad to advise again, if necessary. Don't be morbid.

A. S. K.—1. Diet to be non-stimulant (not too much tea): vegetables, milk-puddings, &c. 2. "Pears'" Soap should suit you well. 3. Try the effect of a lotion composed of liquor of the subacetate of lead, one drachm; glycerine, three drachms; and water, to make up six ounces. Label, "The lotion; for outward use only." Apply this to the face occasionally, and report effect. 4. The mixture you name should not be taken continuously.

T. B.—Yours is a case in which we should hope much from a vegetable dietary. Give this advice a trial, and you may find all your symptoms relieved. Take a little more rest and sleep. Give up tea at night. Dumb-bells to be of light make.

M. H.—See article on "Chiblains" in Health No. 30.

H. T. W.—Follow the treatment ordered at Sheffield. We are inclined to think you exhaust yourself in swimming, and are hence liable to contract muscular cold and pain; but such attacks are often insidious in their nature, and all you can do is to guard assiduously against chill and cold. We fancy you would find the tonic prescribed to "J. F. S." above preferable to the other.

J. T.—Don't wash your head too frequently. This is a frequent cause of baldness. Rub a little Macassar Oil, night and morning, into the roots. Use simply Pears' Soap and tepid water once a week for the hair. We prefer camphorated chalk or magnesia as a tooth-powder.

Ernest.—Try benzoated zinc ointment (as recommended to "Christ Church," in Health, No. 33).

A. B. C. D.—Diet should be generous, but not stimulating; no need to give up the moderate use of meat; a fair amount of vegetables should be taken; and the claret and water is advisable. In winter cod-liver oil emulsion may occasionally be taken along with the food. When low in health, take the tonic recommended to "J. F. S." above. 2. Dumb-bells need not be discontinued, but don't overdo the exercise. 3. Study reaction after your bath as your best guide. If you feel chilly, give up the bath; but remember the risk of cold after tepid baths. 4. Possibly some little rheumatic affection, for which rub in warm oil over the joint. Avoid chills by all means.

A. H. W.—Cod-liver oil to be taken daily after food (a dessert-spoonful). Try cold sponging in the morning, if you have sufficient reaction.

F. J. M.—1. If no disease exists on either side, marriage of first cousins is safe enough. 2. No; not unless there is hereditary insanity. 3. No; the children would simply inherit the parents' constitution.

Tonquin.—We should decidedly recommend you to give vegetarianism a fair trial. In such cases as yours, it is eminently serviceable; but you should go cautiously to work, and don't give up meat altogether, for a time at least. You are probably a little nervous about your digestive troubles; but we think you will get all right with a little care. If you feel anxious about yourself, undergo a thorough examination by a competent physician. Try a little Morson's "Pepsine" along with the food. Glad to be of any further service if need be.

W. M'Pherson.—See advice to "Harry," and "T. Fraser," in Health No. 34.

R. M. B.—1. Cassell's "Family Physician" should suit you; or Dr. Chavasse's works, published by Churchill (London). Dr. Temple's book on the "Management of Children" (see Health, No. 26, page 12), and Dr. Davies' "1,000 Medical Maxims" (price 1s.), Chatto & Windus, London (see Health, No. 26, page 11), are all serviceable. 2. See article on "Chilblains," Health, No. 30. 3. Not necessarily injurious, but increase liability to cold. 4. The reaction is the great guide to the use of the cold bath. If chilled after the bath, give it up.

An Afflicted Scotchman is simply nervous, and has mistaken entirely the characters of the structure he describes. He suffers from no abnormality, and the condition to which he refers is in every way natural. He need have no anxiety, as he suffers from no complaint. Attend to cleanliness, and use plenty of soap and tepid water.

Rufus.—We are pleased to hear our advice has been so successful. Give up the tonic now, and try how you get on without it. Don't overdo the exercise. Medical men know quite well the nature of your trouble; but in your case, there was, as you remark, an omission in the advice you received. Glad to be of any further service.

Lily.—We fancy you might benefit from a course of cod-liver oil emulsion. We have seen cases like yours benefit much under general treatment of this kind. Try warm salt poultices for the knee; and warm oil rubbings. Your diet should be generous but

not stimulating—milk chiefly, with few vegetables. Lemon juice may be taken as a drink, but in your case we should hope most from attention to general health.

C. F. J.—1. You must see an ear-surgeon. Only an examination of the ears can detect the nature of your complaint, and settle the means of cure. 2. See advice above given to "Lily."

Mignon.—Try inhaling the steam arising from a pint of hot water into which 10 drops of tincture of iodine have been placed. This should be tried three or four times a day. If no relief is obtained, you might try the effect of the following:—English oil of juniper, 20 minims: light carbonate of magnesia, 10 grains; water to make up one ounce. Add a teaspoonful of this to a pint of hot water and inhale the steam three or four times daily. You would also benefit from a course of cod-liver oil emulsion. The hair should not be brushed with a hard brush.

T.—1. Your diet should be supplemented, we think, by light, nourishing, animal soups. A little of Morson's "Pepsine" should relieve you, taken along with food. 2. No; take the tonic recommended to "J. F. S." in present number. It ranks high above all others, and is safer than any other. 3. Simply because they cause irritation and reflex action in parts to which you wish to give rest. 4. None of the persons you name are qualified medical practitioners. The "reverend" gentleman is a quack of decided hue; the electrical appliances we know nothing of, but from what we have seen of the pamphlet we should imagine they are not calculated to produce electricity. If you can send us one, we shall test it for you.

J. Upton.—We should decidedly advise you to take cod-liver oil, or the emulsion, through the entire winter after food. This will give you stamina and strengthen your lungs. You might give the following cough-mixture a trial, and let us hear how it suits you:—Carbonate of ammonia, one drachm; tincture of squills, three drachms; compound tincture of camphor, half an ounce; infusion of senega, to make up six ounces. A tablespoonful every four hours. Clothe warmly.

A Reader of "Health."—We should advise for the gout first, great care in diet, with a little "Pepsine" to be taken along with the food. Abstain from fruits, port, sherry, ale, and porter. Claret or hock might be taken cautiously. Plenty of exercise is needed, and the diet should not contain too much animal food. Vichy or Carlstad water should be taken. We cannot advise you to tamper with patent medicines in such a case. "Patience and flannel" were Cullen's gout remedies, and for any active symptoms call in your doctor.

An Assistant.—Give up quacks and quack medicines, and read and follow advice to "Harry" in No. 34 Health. Take also the tonic recommended to "J. F. S." in present number. Be cheerful, and know that with attention to our advice you will in time get quite well.

J. F. A.—A case like that of your child is really a subject for careful medical supervision. The whooping-cough had nothing to do with the affection, which, if your doctor's opinion be correct, must have existed from birth. All that we can recommend are the general principles of warm clothing, rest, and a pure, mild air, with a nourishing diet. You have our hearty sympathy, and our best advice is to put the child more or less constantly under the doctor's eye.

Vox.—We fancy an inhalation occasionally would benefit you. Try the effect of placing ten drops tincture of iodine in a pint of hot water, and inhaling the steam for ten minutes or so. Take care of chill and cold thereafter.

Weak Eye.—Smear the lids at night with a little pure vaseline; and see to your general health. Rest the eyes at night, and try the practice of opening them occasionally while the face is plunged into a basin of cold water.

Hopeless.—Yours is a case of extreme nervous prostration. You are aware that it is more of mental than of physical kind. If you take our advice you will give up all stimulants, and try the tonic recommended to "J. F. S." in present number of Health, for a time. If not better, say in a fortnight, write again, and we will send you the address of a reliable physician, who will thoroughly examine and report upon you.

N. Roberts.—Strict cleanliness, and sponging the parts occasionally with a saturated solution of boracic acid. Persevere with the treatment, and you will soon be quite well.

An Obscured One.—See and follow advice given to "Harry," in No. 34, Health, and take the tonic recommended to "J. F. S." in present number. Be cheerful, and know that with attention to our advice you will soon get well.

Espérance.—Follow the directions for eczema in our "Hair" papers, and take the following:—Syrup of iodide of iron, three drachms; mucilage of acacia, one ounce; cod-liver oil to make up six ounces. A tablespoonful thrice daily, after food. If not improved, write again.

Hairwash W. E.—Try the effect of rubbing a little of Rowland's "Macassar Oil," night and morning, into the roots of the hair. If this simple remedy does not answer your purpose, kindly write again. The head may be washed once a week—not oftener, in your case.

Artemus.—We fancy there is some considerable irritation of the gland you name, and adjoining parts. In your case, a thorough surgical examination is necessary to determine the exact seat of the affection, and this we should advise you to arrange for as soon as you can. The "rheophore" would be of no service unless you exactly knew what the affection was; and its application is not adapted for amateur use. If you think of again consulting a London authority, we shall be glad, if requested, to name a competent surgeon for you.

J. R. H.—1. We believe the gold stopping is by far the best for all purposes. 2. The wens can be removed when they have assumed an ordinary size. No one can say "why" they are hereditary. 3. See two papers on "Headaches" in Part I. of Health, in which full information is given. 4. We should say limit the horse exercise for a time. You are apt to err on the side of overwork.

George the Martyr.—1. See notice to "Harry" in Health No. 34, and also take the tonic recommended therein to "T. Fraser." 2. Try dissolving a piece of borax the size of a pea in the mouth for loss of voice. Good voice lozenges are made by adding half a grain of benzoic acid to red currant paste. One such lozenge should be taken every four hours, and one a quarter of an hour or so before any effort is made with the voice.

Craven.—The following stimulant lotion for the hair may do you good:—Tincture of nux vomica, 3 drachms; distilled vinegar, 2½ oz.; tincture of capsicum, 1 drachm; tincture of cantharides, 6 drachms; spirit of rosemary, 1 oz.; rose water to make up 6 oz. Label "Poison. For outward application only," and rub into the roots with a small sponge.

F. R. S.—1. The analysis of the sample of the phosphorus preparation you sent showed, as we suspected, that it is useless as a remedy. "Free" phosphorus cannot be so combined. "Fellows' Syrup of the Hypophosphites" is a true nerve-tonic, combining all the excellence of phosphorus with other drugs. 2. The case you name is one for careful surgical examination. Throat and ear troubles are often associated. For the phlegm, an inhalation (for five or ten minutes, thrice daily) of the steam arising from hot water, to which ten drops of tincture of iodine have been added, will do good. We shall be glad to send you the name of a good aural surgeon in your city on receipt of a stamped and addressed envelope. The age of the patient renders his accurate examination a necessity.

W. M.—Yes; try the oil. If not bettered, re-state your case, and we will advise. Clothe warmly, and try hot salt baths for the rheumatism; and also try the tonic recommended to "J. F. S." in present number. Make a change in your dietary, and take a little "Æsculap" water in the morning. This latter will probably cure the stomach and head troubles.

S. M.—Touch the little "warts" carefully with a little aromatic vinegar from time to time. This is an unfailing remedy. They arise from some irritation, but it is hard to say the exact nature of this latter. Possibly the hat-lining, together with the sweating of the brow, may have had an effect.

W. H.—We do not know the composition of these hair preparations, but a recent law-suit showed some curious facts about the curious nature of such substances. Read our papers on "The Hair" in the early parts of Health, and you will find therein full information regarding your hair troubles.

Kilmarnock.—Try Tulloch's "Pure Dutch Cocoa," or Van Houten's. Both are extremely good and pure. Dilute in your case largely with milk, as directed.

Norvicensis.—Glad to hear that you have now been successful with the dye. We knew there was no special peculiarity in the dye.

J. Branston.—1. Read our "Hair" papers in early numbers of Health. There is no reliable and safe preparation for "forcing" the moustache. 2. Yes; we should advise you to be medically examined. There is some irritation either in the kidneys or elsewhere which should be seen to. Probably the cause is simple; but it can only be detected by examination. 3. Wear a suspensory bandage, and use cold sponging.

Milo.—See advice to "Harry," in No. 34 of Health, and take the tonic recommended to "J. F. S." in present number. Don't overdo your exercise; you overdo it as things are. Rest more, and study moderately. What you name is often a sign of health. When your health is fully established, the symptoms you mention will disappear. Glad to be of any further service.

Frank.—Try the following (and, if not bettered, write again):—bi-carbonate of soda, one drachm; glycerine, an ounce and a half. Apply as a lotion to the affected parts.

[*Continued on page* 160.

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R. T. S.—Take the tonic recommended to "J. F. S." in present number, and let us hear how you are after a week or ten days' trial thereof. Clothe warmly and avoid chills.

South Foreland.—1, For the itching, use the lotion above recommended to "Frank," and if not bettered write again. 2. The vaccination had nothing to do with the affection you name. For the eruption, try the effect of benzoated zinc ointment applied on a rag to the parts.

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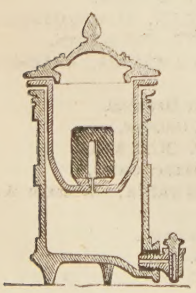

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